

# Vanguard MedReview, Inc.

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## Notice of Independent Review Decision

May 2, 2014

### IRO CASE #:

### DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

L4-L5 Arthroplasty and L5-S1 ALIF with 2 days inpatient stay

### A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:

This physician is a Board Certified Orthopedic Surgeon with over 13 years of experience.

### REVIEW OUTCOME:

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

☒ Upheld (Agree)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

### INFORMATION PROVIDED TO THE IRO FOR REVIEW:

### PATIENT CLINICAL HISTORY [SUMMARY]:

The Claimant injured himself running on xx/xx/xx. He felt a burning sensation in his hamstring, so he discontinued running. He flew home for an MRI and evaluation.

03/09/2005: Patient Examination. **History:** The patient describes persistent pain in his buttock and hamstring. No numbness or tingling. He has a history of back spasms in the past, but no significant radiculopathy. **Examination:** On examination, the patient has full range of motion without spasm on trunk shift but has buttock pain with both flexion and extension and posterior leg pain all on the left side. Sciatic notch testing is positive on the left, negative on the right. Root tension signs are positive on the left both supine and sitting as they are contralaterally Reflexes are 2+ and symmetric. Motor testing with particular

attention to the gastrosolea is within normal limits. Sensation to light touch and pinprick is within normal limits. **Diagnostic Studies:** 03/09/2005: MRI of the Lumbar Spine. Impression: Large disc herniation on the left at L5-S1. **Plan:** The different clinical scenarios have been patient has elected a microscopic lumbar discectomy at L5-S1 on the left. We will proceed with that tomorrow.

03/10/2005: Operative Report. **Postoperative Diagnosis:** Lumbar disk herniation, lumbar 5, sacral 1 left. **Operation:** Microscopic lumbar discectomy, lumbar 5, sacral 1 right.

01/22/2007: Patient Evaluation. **History:** is two weeks status post an urgent lumbar discectomy at L5-S1 to the left. He states the pins and needle sensation is gone, but he still has some dense numbness in his leg and foot and a pain that he rates as 4/10 particularly in the gastrosoleus. **Examination:** His incision is well healed. Forward to flexion to about 30 degrees gives him a little bit of gluteal pain. He has a positive sciatic notch test on the left; negative on the right. Straight leg raising is positive on the left at about 45 degrees. He has good bench test plantar flexion strength, but he is unable to raise his 300 pounds against gravity. **Plan:** He still has a loss of sensation in both the L5 and S1 distributions and just motor weakness in the S1 distribution as his dorsiflexion and extensor hallucis power are normal. 2. He will continue on Lyrica and in Indocin 75 mg p.o.q.d. and Lortab 7.5 mg as needed for pain.

02/02/2009: Patient Evaluation. **History:** is having increasing symptoms in his right lower extremity. He is no feeling it into his hamstring and kind of a dull ache much like he had when he had his disc herniation on the left side. He did have the facet injection and SI Injection last June and he seemed to get some relief from that. In terms of the left side, where his surgery was performed times two, he has some persistent numbness in his lateral border of his foot, kind of a mild ache in his hamstring and calf and still a little bit of weakness. **Examination:** He has no pain with forward flexion or at least minimum. Extension and extension-rotation on the right gives right-sided back pain. Extension-rotation gives left-sided back pain. Root tension signs are weakly positive bilaterally. He has weakness with both gastro-soleus complexes with repetitive plantar flexion, worse on the left than on the right. **Plan:** Repeat MRI with and without gadolinium. Consider a myelo CT.

02/04/2009: MRI of the Lumbar Spine Without and With Contrast. **Impression:** 1.No significant change since the last CT of the lumbar spine dated 4/4/08. 2. No Central canal stenosis, and no evidence of nerve root impingement. 3. At L5-S1, there has been a left laminectomy. There is mild disc bulging, spondylosis, facet degenerative changes, and degenerative disc disease. 4. At L4-5, there is mild disc bulging, spondylosis, facet degenerative changes, and degenerative disc disease.

02/16/2009: Lumbar Myelogram. **Impression:** There are small ventral impressions at L5-S1 and L4-5. These further assessed on the postmyelogram CT scan, which is reported separately.

02/16/2009: Postmyelogram CT Scan of the Lumbar Spine. **Impression:** 1. There has been a left-sided laminotomy at L5-S1. 2. There is a mild bulging of the annulus and a mild degenerative arthritic change of the facet joints at L5-S1. 3. There is a minimal bulging of the annulus at L4-5. 4. Otherwise negative postmyelogram CT scan of the lumbar spine.

09/09/2013: MRI of the Lumbar Spine With and Without Contrast. **Impression:** Recurrent left L5-S1 disc herniation.

01/10/2014: Office Visit. **History:** The patient presents with long standing back pain with radiculopathy down bilateral legs left greater than right. Patient has had 2 laminectomies at L5-S1 on the left side in the past. Patient reports that although he had had multiple injections including ESI's, facet injections, and 4 rhizotomies, he was doing fairly well until summer of 2013. He has severe left-sided back pain with radicular symptoms down the left leg. He describes the pain as sharp. It's exacerbated with sitting, walking, driving, and stretching. It's relieved somewhat with laying on his side, and hydrocodone. Patient is currently not working. He is no longer participating in therapy as it does not help ordered an MRI back in September which showed repeat radiation of left L5-S1. He is primarily transverse to the sacral back pain, pseudo-radicular pain into the right buttock and thigh, persisting sciatica-type pain down the left leg, and has residual numbness on the lateral aspect of the left foot subsequent to his second surgery. He's also had some persistent gastroc and toe walk weakness as since the second surgery. **Current Medications:** Norco tabs **Physical Exam:** Height: 77 inches Weight: 260 pounds BMI: 30.94 Well appearing male in minimal distress. Limited ROM of the lower back. Forward flexion hands to knee. Extension 5 percent. Positive straight leg raise and contralateral straight leg raise. 4/5 strength in bilateral lower extremities with quadriceps and tibialis anterior. Decreased sensation in the L5 and S1 distribution. **X-Ray:** AP flexion and extension lumbar films done in clinic today shows 50% disc space narrowing at L4-5 and greater than 50% severe disc space narrowing at L5-S1 with retrolisthesis. **Plan:** Given the anterior and posterior column nature of his pathology L5-S1 I recommend a fusion at that level. However, his L4-5 level, with decreased disc height and hydration but relatively healthy looking facets is certainly amenable to reconstruction with Arthroplasty. This type of construct would help protect the more cephalad levels, whereas a fusion at L5-S1 should provide maximum potential for benefit for his anterior and posterior column difficulties. I would plan an anterior hold the procedure with a stand-alone ALIF construct and infuse and L5-S1 and Arthroplasty per this device at L4-5, pending authorization. **New Medications:** Norco Tabs **Problems Added in Today's visit:** Lumbosacral spondylosis without myelopathy, acquired spondylolistheses, intervertebral disc DO w/myelopathy lumbar, post laminectomy syndrome, lumbar, low back pain.

03/04/2014: UR performed. Rational for Denial: The requested L1-5 Arthroplasty L5-S1 ALIF with 2 Day LOS with Co-surgeon, pre-op bone density test is not 1/10/14 medically necessary. ODG does not recommend disc arthroplasty in line with FDA current findings and CMS recommendations, therefore the requested

L4-5 Arthroplasty is not medically necessary and being unable to modify the request the L5-S1 fusion is not medically necessary, and the attendant request of 2 day LOS, co-surgeon, and pre-operative bone density test are not medically necessary as the surgery is not medically necessary.

03/24/2014: UR. Rational for Denial: Patient has chronic low back pain. Patient has recurrent disc herniation. There was failure of prior surgeries, medication, PT, activity modification and injections. The surgical request is not medically necessary per evidence based guidelines. The use of the disc prosthesis in the lumbar spine is not supported per evidence based guidelines. There was request for fusion with disc replacement. There are no long term peer review studies that show safety and efficacy of this procedure. A fusion would be supported per evidence based guidelines to address the current pathology in the low back. A modification is not permitted per guidelines.

**ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:**

The original adverse determinations are upheld. Based on the records reviewed, L4-L5 Arthroplasty and L5-S1 ALIF are not indicated for this patient. The Official Disability Guidelines (ODG) does not support artificial disc replacement. This procedure is considered experimental. Evidence based medicine has not demonstrated any advantage of disc replacement over spinal fusion. A spinal fusion next to a disc replacement is also considered investigational. Surgery at L4-5 is based on radiographic findings, without any confirmation of this level as a pain generator. Psychological screening has not been performed prior to the spinal fusion at L5-S1. The proposed procedure is not medically necessary at this time and should be denied.

Per ODG:

Disc prosthesis	Not recommended. While artificial disc replacement (ADR) as a strategy for treating degenerative disc disease has gained substantial attention, it is not possible to draw any positive conclusions concerning its effect on improving patient outcomes. The studies quoted below have failed to demonstrate superiority of disc replacement over lumbar fusion, which is also not a recommended treatment in ODG for degenerative disc disease. The anatomic implications of total disc replacement are different from total hip or total knee replacements, and the perceived corollary between total disc replacement and total hip or knee replacement is not justified. Furthermore, longevity of this new procedure is unknown, especially with a relatively young average age in workers' comp patients, and the consequences of failure of an implant in close proximity to caudal equina and vital organs (e.g., aorta, vena cava and iliac arteries) are of concern. Plus, adjacent segment disease seems to be a natural aging process, and despite early intentions, ADR has not proven any benefit in altering that progression compared to fusion. See separate document with all studies focusing on <a href="#">Disc prosthesis</a> . ( <a href="#">Cinotti-Spine, 1996</a> ) ( <a href="#">Klara-Spine, 2002</a> ) ( <a href="#">Zeegers, 1999</a> ) ( <a href="#">Blumenthal, 2003</a> ) ( <a href="#">Zigler, 2003</a> ) ( <a href="#">McAfee, 2003</a> ) ( <a href="#">Anderson-Spine, 2004</a> ) ( <a href="#">Gamradt-Spine, 2005</a> ) ( <a href="#">Gibson-Cochrane, 2005</a> ) See also the <a href="#">Neck</a>
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	<p><a href="#">Chapter</a>. Total disc replacements should be considered experimental procedures and should only be used in strict clinical trials. (<a href="#">deKleuver, 2003</a>) At the current time radiculopathy is an exclusion criteria for the FDA studies on lumbar disc replacement. (<a href="#">McAfee-Spine, 2004</a>) Even though medical device manufacturers expect this to be a very large market (<a href="#">Viscogliosi, 2005</a>), the role of total disc replacement in the lumbar spine remains unclear and predictions that total disc replacement (TDR) will replace fusion are premature. One recent study indicates that only a small percentage (5%) of the patients currently indicated for lumbar surgery has no contraindications to TDR. (<a href="#">Huang-Spine, 2004</a>) Because of significantly varying outcomes, indications for disc replacement need to be defined precisely. In this study better functional outcome was obtained in younger patients under 40 years of age and patients with degenerative disc disease in association with disc herniation. Multilevel disc replacement had significantly higher complication rate and inferior outcome. (<a href="#">Siepe, 2006</a>) On the other hand, this case series reporting on the long-term results of one-level lumbar arthroplasty reported that after a minimum 10-year follow-up, 90% of patients had returned to work, including 78% of patients with hard labor level employment returning to the same level of work. (<a href="#">David, 2007</a>) According to this prospective, randomized, multicenter FDA IDE study, the ProDisc-L has been shown to be superior to circumferential fusion by multiple clinical criteria. (<a href="#">Zigler, 2007</a>)</p> <p><i>Recent research:</i> A high quality meta-analysis/health technology assessment concluded that there is insufficient evidence to draw extensive efficacy/effectiveness conclusions comparing artificial disc replacement (ADR) with a broad range of recommended treatment options, including conservative nonoperative care, since, other than spinal fusion, there are currently no direct comparison studies. With respect to the comparison of lumbar artificial disc replacement (L-ADR) and fusion, overall clinical success was achieved in 56% of patients receiving L-ADR and 48% receiving lumbar fusion. Though the results suggest that 24-month outcomes for L-ADR are similar to lumbar fusion, it should be noted that for the lumbar spine, the efficacy of the comparator treatment, lumbar fusion, for degenerative disc disease remains uncertain, especially when it is compared with nonoperative care. Given what is known about lumbar fusion as a comparator and having evidence that only compares L-ADR with lumbar fusion limits the ability to fully answer the efficacy/effectiveness question. (<a href="#">Zigler, 2007</a>) (<a href="#">Blumenthal, 2005</a>) (<a href="#">Dettori, 2008</a>) Although there is fair evidence that artificial disc replacement is similarly effective compared to fusion for single level degenerative disc disease, insufficient evidence exists to judge long-term benefits or harms. (<a href="#">Chou, 2009</a>) The ECRI health technology assessment concluded that the safety data on lumbar ADR are inadequate to draw conclusions about long-term safety. (<a href="#">ECRIa, 2009</a>) This RCT compared disc prosthesis with multidisciplinary rehabilitation for 12-15 days, and found differences in favor of surgery, but the difference between groups was smaller than the difference that the study was designed to detect. In concluding, given the association of surgery with potentially serious complications, and the considerable improvement in the rehabilitation group, they recommended considering a multidisciplinary rehabilitation first. (<a href="#">Hellum, 2011</a>) A just-released Cochrane systematic review concludes that the lumbar artificial disc is still not ready for routine clinical use because the long-term risks and benefits of this treatment have not been documented adequately. (<a href="#">Jacobs, 2012</a>) A <i>Back Letter</i> article entitled, "Future Still Uncertain for the Lumbar Artificial Disc," reports that patients, physicians, and healthcare systems were wise to resist the massive wave of publicity in favor of the artificial disc for the treatment of chronic back pain. (<a href="#">Wiesel, 2012</a>)</p> <p><i>Safety &amp; Complications:</i> There is moderate evidence that L-ADR is as safe as lumbar anterior or circumferential fusion. The studies primarily reflect outcomes measured up to 24 months and therefore questions remain regarding the long-term safety and efficacy of L-ADR compared with fusion. This is an important matter, particularly in workers' comp patients who may be younger. Since these are mechanical devices, future failure is a possibility and may influence complication rates and costs in the longer-term. (<a href="#">Dettori, 2008</a>) Revision procedures have</p>
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	<p>included posterior stabilization or anterior revision or conversion to arthrodesis. Risk of great vessel and retroperitoneal injury is greater than with primary procedures. (<a href="#">Patel, 2008</a>) We do not know the long-term failure rate or impact of particular wear on these devices, and the theoretical position that symptomatic adjacent segment disease leads to more surgery after fusion compared to less aggressive treatment is poorly founded, plus these devices appear at best to yield results equal to or only incrementally better than fusion for the same indications. (<a href="#">Resnick, 2007</a>)</p> <p><u>Indications:</u> Indications for L-ADR include, among other factors, primary back pain and/or leg pain in the absence of nerve root compression with single level disease. This group of patients is different than those undergoing cervical ADR and results from one group should not be inferred to the other. Cervical ADR is performed in patients with radiculopathy (cervical nerve root compression) causing arm pain and possibly motor weakness, or even myelopathy (compression of the spinal cord that could affect upper extremities, lower extremities, bowel, and bladder function). The problem of identifying those likely to respond to treatment is of concern for L-ADR in that the surgical procedure is designed to treat degenerative disc disease that is thought to be the origin of the patient's pain, but certainty around the diagnosis as the cause of low back symptoms varies. Though L-ADR for degenerative disc disease has been compared with lumbar fusion, not all patients who get a fusion are candidates for L-ADR, including patients with nerve root compression, spondylolisthesis, stenosis, facet mediated pain and osteoporosis. In fact, the proportion of patients who have an indication for L-ADR make up only about 5% of those who might undergo lumbar fusion. (<a href="#">Dettori, 2008</a>)</p> <p><u>Current US treatment coverage recommendations:</u> Variations exist in coverage policies for ADR for CMS and selected bell-weather payers. <i>Medicare:</i> The Centers for Medicare and Medicaid Services (CMS) will not cover lumbar ADR for patients older than 60 years of age and decisions regarding coverage of patients younger than 60 years of age are at the discretion of local CMS contractors. (<a href="#">Medicare, 2007</a>) <i>Aetna</i> considers prosthetic intervertebral discs medically necessary for degenerative disc disease at one level. (<a href="#">Aetna, 2007</a>) <i>Blue Cross/Blue Shield:</i> Coverage is not recommended. (<a href="#">Blue Cross/Blue Shield, 2007</a>) <i>Cigna</i> covers the lumbar intervertebral disc prosthesis. (<a href="#">Cigna, 2007</a>) <i>Harvard Pilgrim</i> does not cover artificial disc replacement for DDD as an alternative to spinal fusion. (<a href="#">Harvard Pilgrim, 2006</a>) <i>Washington State Department of Labor and Industries:</i> Initially concluded that data insufficient to draw conclusions, L-ADR should be considered experimental only. (<a href="#">Washington LNI, 2004</a>) Then in March of 2009, based on the 2008 Washington Technology Assessment (<a href="#">Dettori, 2008</a>), Washington LNI released an official Coverage Determination stating that Lumbar ADR would be covered under these conditions: (1) Post-completion of a multi-disciplinary pain program; (2) Age 60 or less; (3) Consistent with FDA approved indications (i.e., failure of 6-months non-operative treatment, skeletally mature patient, single disc only, no infection, no sensitivity to implant materials, no osteoporosis or spondylosis). (<a href="#">Washington, 2009</a>) <i>Health Net</i> considers both artificial lumbar and cervical disc replacements investigational and therefore not medically necessary. (<a href="#">Health Net, 2012</a>) Artificial disc acceptance has been poor. According to the latest AHRQ data, the volume of lumbar disc prosthesis procedures (ICD 84.65) declined by 28% in the latest year, to 1,026 in 2011 from 1,424 in 2010 (the procedure peaked in 2005 at 3,165), while average costs increased, from \$61,812 to \$87,302. (<a href="#">HCUP, 2014</a>)</p> <p>For average hospital LOS if criteria are met, see <a href="#">Hospital length of stay</a> (LOS).</p>
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#### **Patient Selection Criteria for Lumbar Spinal Fusion:**

For chronic low back problems, fusion should not be considered within the first 6 months of symptoms, except for fracture, dislocation or progressive neurologic loss. Indications for spinal fusion may include: (1) Neural Arch Defect - Spondylolytic spondylolisthesis, congenital neural arch hypoplasia. (2) Segmental

Instability (objectively demonstrable) - Excessive motion, as in degenerative spondylolisthesis, surgically induced segmental instability and mechanical intervertebral collapse of the motion segment and advanced degenerative changes after surgical discectomy, with relative angular motion greater than 20 degrees. ([Andersson, 2000](#)) ([Luers, 2007](#)) (3) Primary Mechanical Back Pain (i.e., pain aggravated by physical activity)/Functional Spinal Unit Failure/Instability, including one or two level segmental failure with progressive degenerative changes, loss of height, disc loading capability. In cases of workers' compensation, patient outcomes related to fusion may have other confounding variables that may affect overall success of the procedure, which should be considered. There is a lack of support for fusion for mechanical low back pain for subjects with failure to participate effectively in active rehab pre-op, total disability over 6 months, active psych diagnosis, and narcotic dependence. Spinal instability criteria includes lumbar inter-segmental movement of more than 4.5 mm. ([Andersson, 2000](#)) (4) Revision Surgery for failed previous operation(s) if significant functional gains are anticipated. Revision surgery for purposes of pain relief must be approached with extreme caution due to the less than 50% success rate reported in medical literature. (5) Infection, Tumor, or Deformity of the lumbosacral spine that cause intractable pain, neurological deficit and/or functional disability. (6) After failure of two discectomies on the same disc, fusion may be an option at the time of the third discectomy, which should also meet the ODG criteria. (See [ODG Indications for Surgery -- Discectomy](#).)

**Pre-Operative Surgical Indications Recommended:** Pre-operative clinical surgical indications for spinal fusion should include all of the following: (1) All pain generators are identified and treated; & (2) All physical medicine and manual therapy interventions are completed; & (3) X-rays demonstrating spinal instability and/or myelogram, CT-myelogram, or discography (see [discography criteria](#)) & MRI demonstrating disc pathology correlated with symptoms and exam findings; & (4) Spine pathology limited to two levels; & (5) [Psychosocial screen](#) with confounding issues addressed. (6) For any potential fusion surgery, it is recommended that the injured worker refrain from smoking for at least six weeks prior to surgery and during the period of fusion healing. ([Colorado, 2001](#)) ([BlueCross BlueShield, 2002](#)) For average hospital LOS after criteria are met, see [Hospital length of stay](#) (LOS).

#### **ODG hospital length of stay (LOS) guidelines:**

##### **Discectomy** (*icd 80.51 - Excision of intervertebral disc*)

Actual data -- median 1 day; mean 2.1 days ( $\pm 0.0$ ); discharges 109,057; charges (mean) \$26,219

Best practice target (no complications) -- *Outpatient*

##### **Laminectomy** (*icd 03.09 - Laminectomy/laminotomy for decompression of spinal nerve root*)

Actual data -- median 2 days; mean 3.5 days ( $\pm 0.1$ ); discharges 100,600; charges (mean) \$34,978

Best practice target (no complications) -- *1 day*

*Note: About 6% of discharges paid by workers' compensation.*

##### **Lumbar Fusion, posterior** (*icd 81.08 - Lumbar and lumbosacral fusion, posterior technique*)

Actual data -- median 3 days; mean 3.9 days ( $\pm 0.1$ ); discharges 161,761; charges (mean) \$86,900

Best practice target (no complications) -- *3 days*

*Note: About 15% of discharges paid by workers' compensation.*

##### **Lumbar Fusion, anterior** (*icd 81.06 - Lumbar and lumbosacral fusion, anterior technique*)

Actual data -- median 3 days; mean 4.2 days ( $\pm 0.2$ ); discharges 33,521; charges (mean) \$110,156

Best practice target (no complications) -- *3 days*

##### **Lumbar Fusion, lateral** (*icd 81.07 - Lumbar fusion, lateral transverse process technique*)

Actual data -- median 3 days; mean 3.8 days ( $\pm 0.2$ ); discharges 15,125; charges (mean) \$89,088

Best practice target (no complications) -- *3 days*

##### **Thoracic Fusion, posterior** (*81.05 - Dorsal and dorsolumbar fusion, posterior technique*)

Actual data -- median 6 days; mean 8.1 days ( $\pm 0.2$ ); discharges 20,239; charges (mean) \$159,420

Best practice target (no complications) -- *5 days*

##### **Artificial disc** (*84.65 - Insertion of total spinal disc prosthesis, lumbosacral*)

Actual data -- median 3 days; mean 2.6 days ( $\pm 0.1$ ); discharges 1,653; charges (mean) \$65,041

Best practice target (no complications) -- *Never recommended*

*Note: About 30% of discharges paid by workers' compensation.*

##### **Artificial disc revision** (*84.68 - Revision/replacement artificial spinal disc prosthesis, lumbar*)

Actual data -- median 3 days; mean 4.4 days ( $\pm 0.8$ ); discharges 169; charges (mean) \$58,355

Best practice target (no complications) -- *Never recommended*

##### **X-Stop** (*84.80 - Insertion or replacement of interspinous process device*)

Actual data -- median 1 day; mean 1.8 days ( $\pm 0.1$ ); discharges 4,177; charges (mean) \$47,339

Best practice target (no complications) -- *Never recommended*



**Kyphoplasty** (81.66 - *Percutaneous vertebral augmentation*)

Actual data -- median 4 days; mean 5.4 days ( $\pm 0.2$ ); discharges 23,458; charges (mean) \$46,593

Best practice target (no complications) -- 3 days

**Vertebroplasty** (81.65 - *Percutaneous vertebroplasty*)

Actual data -- median 5 days; mean 6.3 days ( $\pm 0.2$ ); discharges 13,694; charges (mean) \$37,444

Best practice target (no complications) -- 3 days

**IDET** (80.54 - *Other and unspecified repair of the anulus fibrosus*)

Actual data -- no overnight stays

Best practice target (no complications) -- *Never recommended*

**PIRFT** (80.59 - *Other destruction of intervertebral disc*)

Actual data -- median 3 days; mean 6.6 days ( $\pm 1.8$ ); discharges 196; charges (mean) \$41,249

Best practice target (no complications) -- *Never recommended*

**SCS** (03.93 *Implantation or replacement of spinal neurostimulator leads*)

Actual data -- median 1 day; mean 2.3 days ( $\pm 0.2$ ); discharges 3,998; charges (mean) \$68,730

Best practice target (no complications) -- 1 day

**Intrathecal Pump** (86.06 - *Insertion of totally implantable infusion pump*)

Actual data -- median 3 days; mean 5.4 days ( $\pm 0.4$ ); discharges 6,995; charges (mean) \$62,325

Best practice target (no complications) -- 3 days

**Fracture of vertebral column** (03.53 - *Repair of vertebral fracture*)

Actual data -- median 9 days; mean 13.4 days ( $\pm 0.6$ ); discharges 3,458; charges (mean) \$156,940

Best practice target (no complications) -- 9 days



**A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR  
OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

- ☐ **ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL &  
ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE**
- ☐ **AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY  
GUIDELINES**
- ☐ **DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR  
GUIDELINES**
- ☐ **EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW  
BACK PAIN**
- ☐ **INTERQUAL CRITERIA**
- ☒ **MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN  
ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- ☐ **MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- ☐ **MILLIMAN CARE GUIDELINES**
- ☒ **ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**
- ☐ **PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR**
- ☐ **TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE &  
PRACTICE PARAMETERS**
- ☐ **TEXAS TACADA GUIDELINES**
- ☐ **TMF SCREENING CRITERIA MANUAL**
- ☐ **PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE  
(PROVIDE A DESCRIPTION)**
- ☐ **OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME  
FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**